

Please add the following abstract:

A deep cryogenic tempering process for brake components such as rotors and drums is provided, wherein the unique processing profile is dependent on properties of the specific brake components. The process comprises the steps of <sup>61</sup> placing a brake component at a temperature within a cryogenic processing chamber, cooling the brake component at a descent rate until the brake component temperature is approximately -300° F, maintaining the brake component temperature at -300° F for a stay time, raising the temperature of the brake component to approximately 300° F at an ascent rate, maintaining the temperature of the brake component at 300° F for a post temper time, and lowering the temperature of the brake component to room temperature at a cool down rate.

IN THE CLAIMS

~~Please cancel Claim 1.~~

Please amend the claims in accordance with the following rewritten claims in clean form. Applicant includes herewith an Attachment for Claim Amendments showing a marked up version of each amended claim in which underlines indicate insertions and brackets indicate deletions.

2. (Amended) A method for deep cryogenic tempering of

<sup>62</sup> brake components, the method comprising the steps of:

(a) placing a brake component at a temperature within a cryogenic processing chamber;

(b) cooling the brake component at a descent rate until the brake component temperature is approximately  $-300^{\circ}$  F;

(c) maintaining the brake component temperature at  $-300^{\circ}$  F for a stay time;

(d) raising the temperature of the brake component to approximately  $300^{\circ}$  F at an ascent rate;

(e) maintaining the temperature of the brake component at  $300^{\circ}$  F for a post temper time;

(f) lowering the temperature of the brake component to room temperature at a cool down rate;

(g) raising the temperature of the brake component to approximately  $300^{\circ}$  F at an ascent rate;

(h) maintaining the temperature of the brake component at  $300^{\circ}$  F for a post temper time; and

(i) lowering the temperature of the brake component to room temperature at a cool down rate.

3. (Amended) The method of Claim 2, wherein steps (g), (h), and

*②* (i) are repeated for a third post temper time.

5. (Amended) The method of Claim 2 further comprising the

*③* step of:

raising the temperature of the brake component to approximately  $-100^{\circ}$  F within the cryogenic processing chamber after step (c) and before step (d).